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10/786,858	02/25/2004	Richard D. Bomba	87331NAB	3656

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EXAMINER

DANIELS, MATTHEW J

ART UNIT	PAPER NUMBER
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1732

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/786,858	Applicant(s) BOMBA ET AL.	
	Examiner Matthew J. Daniels	Art Unit 1732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 38-40, 42 and 43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 38-40, 42 and 43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 April 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. In the response received 9 April 2007, Claims 1-37 and 41 were cancelled, Claim 38 was amended, and Claims 42 and 43 were newly presented.

Drawings

2. New drawings were received on 9 April 2007. These drawings are approved.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. **Claims 38-40, 42, and 43** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. **As to Claim 38**, it is disclosed in the drawings that the first and second land surfaces are the die surfaces, but are not mounted on a die. There is no disclosure of separable land surfaces which are mounted on a die. **As to Claims 42 and 43**, the specification (page 2, lines 22-25) discloses that the rotation of the patterned roller develops a hydrodynamic surface. Therefore, it is not the die that is disclosed as maintaining a hydrodynamic pressure.

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Additionally, a text search of the application did not reveal any disclosure that the hydrodynamic pressure is "constant". Only the gap is maintained as uniform (Page 4, line 4).

Claim Rejections - 35 USC § 102

4. Rejections set forth previously under this section are withdrawn in view of the amended claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Rejections set forth previously under this section are withdrawn in view of the amended claims.

6. **Claims 38-40 and 42** is rejected under 35 U.S.C. 103(a) as being unpatentable over Gelsomini (USPN 4828778) in view of Menzin (USPN 3752619) and Morse (USPN 4664303).

As to Claim 38, Gelsomini teaches a method for producing a patterned web (1:67-2:51) comprising the steps of:

heating a material which comprises said web (3:37);

providing said material into a cavity at a controlled rate (3:57);

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distributing said material over a length of a slot (2:9-17 and item 14 in Fig. 1);

forcing said material into a cavity (2:15-17) formed by a first external land surface, a second external land surface and a surface of a patterned roller (Fig. 1, item 12 provides the two land surfaces);

partially solidifying said material under high-pressure (implicit in that the polymer is subjected to pressure and the roller is cooled to form blade-like elements against the roller, 2:42-51); and

wherein a substantially uniform gap is maintained between the roller and an edge of the external land surfaces (2:16-23 and 2:59, the sheet is substantially flat)

Gelsomini is silent to (a) “pumping” the material into the cavity, and (b) the roller is mounted on gimbals wherein the gimbals maintain a uniform gap between the roller and an edge of the first external land surface.

However, these aspects of the invention would have been prima facie obvious for the following reasons:

(a) Menzin teaches pumping the material to the roller (4:52-57). Menzin additionally teaches that springs are used to maintain the position of the roller with respect to the die (item 52), and would therefore further maintain a uniform gap.

(b) Morse teaches that use of gimbals to mount a roller which supports a web (title).

It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the methods of Menzin and Morse into that of Gelsomini because (a) Gelsomini explicitly suggests that the material should be supplied under pressure (2:29) and at a fixed mass flow rate (3:57), and a pump would be a desirable method for achieving both

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objectives, and (b) the mount of Morse would provide a steering axis for the roller (Morse, 4:49) which would maintain the roller in the appropriate orientation to the die of Gelsomini. **As to Claims 39 and 40**, Gelsomini implicitly continues solidification of the material after it exits the cavity in view of the use of a molten material and a cooled drum (2:40-50), and the web of Gelsomini is stripped from the patterned roller (col. 2) in order that it be used for its intended purpose. **As to Claim 42**, Gelsomini is silent to the hydrodynamic pressure on the material being maintained constant. However, Menzin teaches pumping the material to the roller (4:52-57), and use of a spring to maintain a force between the roller and die (Fig. 1, items 52, 35, and Fig. 4, item 29). It is submitted that the spring of Menzin used with the fixed mass flow rate of Gelsomini (3:57-58) would maintain a constant hydrodynamic pressure on the material.

7. **Claim 43** is rejected under 35 U.S.C. 103(a) as being unpatentable over Gelsomini (USPN 4828778) in view of Menzin (USPN 3752619). **As to Claim 42**, Gelsomini teaches a method for producing a patterned web (1:67-2:51) comprising the steps of:

heating a material which comprises said web (3:37);

providing said material into a cavity at a controlled rate (3:57);

distributing said material over a length of a slot (2:9-17 and item 14 in Fig. 1);

forcing said material into a cavity (2:15-17) formed by a first external land surface, a second external land surface and a surface of a patterned roller (Fig. 1, item 12 provides the two land surfaces);

partially solidifying said material under high-pressure (implicit in that the polymer is subjected to pressure and the roller is cooled to form blade-like elements against the roller, 2:42-51); and

Gelsomini is silent to “pumping” the material into the cavity and maintaining a constant hydrodynamic pressure on the material.

However, Menzin teaches pumping the material to the roller (4:52-57), and use of a spring to maintain a force between the roller and die (Fig. 1, items 52, 35, and Fig. 4, item 29). It is submitted that the spring of Menzin used with the fixed mass flow rate of Gelsomini (3:57-58) would maintain a constant hydrodynamic pressure on the material.

It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of Menzin into that of Gelsomini in order to maintain the constant engagement between the die and the roller which would provide the proper spacing to produce the desired product (Menzin, 5:24-32), which Gelsomini would find desirable in order to provide a substantially flat sheet comprising the backing of the layer (2:9-23).

Response to Arguments

8. Applicant's arguments filed 9 April 2007 have been fully considered but they are not persuasive or are moot in view of the new grounds of rejection set forth above. The arguments appear to be on the following grounds:

a) “The radial contact die method of the present invention does not require a predetermined gap. This gap varies to compensate for geometry variations in the roller and the die, fluctuations in mass flow rate of the resin, and roller speed.” (Page 4 of the remarks, last paragraph).

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b) Takizawa would not provide the additional pressure present in the invention with respect to the roller surface, which enables high fidelity replication.

9. These arguments are not persuasive for the following reasons:

- a) See page 4, lines 4-5 of the instant specification which discloses that “A uniform gap is maintained between the rotating patterned roller surface and the edge of the first external land and the second external land.” (emphasis added) The portions of Takizawa cited by Applicants show similarity with the claimed invention where the gap is now claimed to be uniform. However, it is submitted that in the rejections above that Gelsomini would have found it obvious to maintain a uniform gap in order to produce uniform material.
- b) The arguments presented appear to be opinion evidence only, and cannot take the place of evidence in the record. Additionally, in view of the new rejections above in which Gelsomini provides land shapes substantially the same as claimed, that the claimed effects or improvements would also be implicit in the method of Gelsomini.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew J. Daniels whose telephone number is (571) 272-2450. The examiner can normally be reached on Monday - Friday, 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on (571) 272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MJD 6/21/07

MJD


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6/22/07